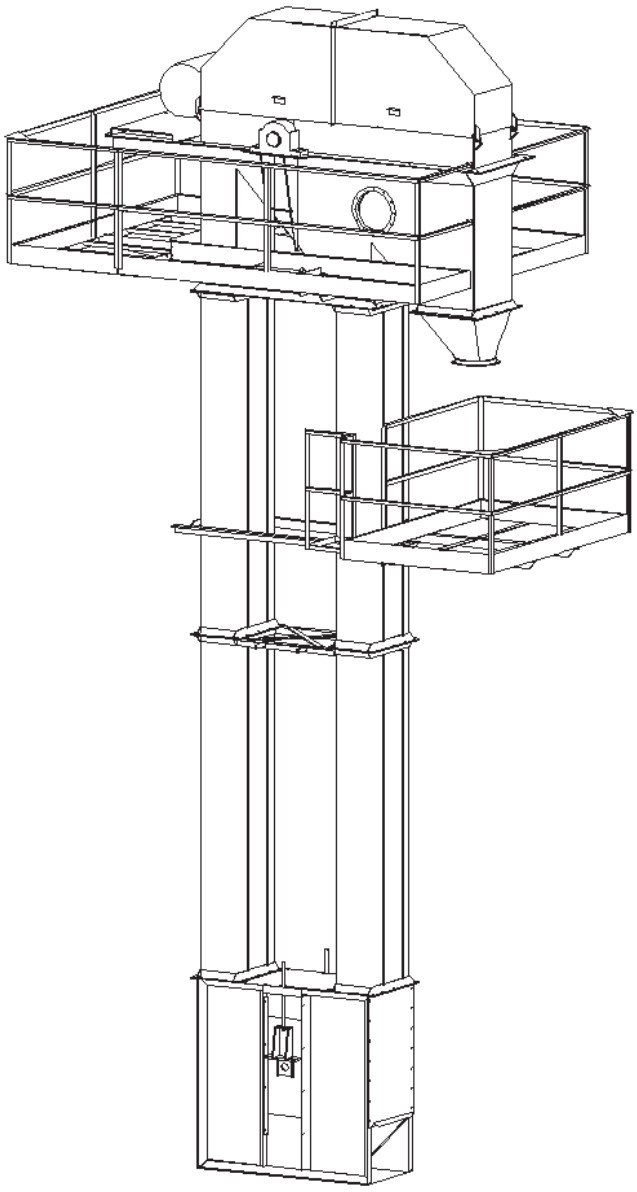
Honeyville
METAL, INC. TOPEKA, IN

BUCKET ELEVATOR
ASSEMBLY AND SERVICE MANUAL
MODEL 24-10



Dealer Name: _____

Dealer Order #: _____

Project Name: _____

Honeyville Order #: _____

Elevator Serial #: _____

Elevator Model #: 24-10

Discharge Height: _____

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Topeka, IN 46571

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12/17/2014

HONEYVILLE METAL, INC.
BUCKET ELEVATOR

DEALER NAME:	
MODEL:	24-10
SERIAL NO:	
DISCHARGE:	
BELT:	
BUCKET SIZE:	
HEAD BEARINGS:	
BOOT BEARINGS:	

BOOT TAKE-UP INFORMATION:

When tightening the belt at boot adjustment, always be sure that the belt tracks and is centered in the elevator housing.

DRIVE INFORMATION: ☐ HMI Supplied ☐ Dealer/Customer Supplied

Model Reducer:	
Motor Sheave:	
Driven Sheave:	
Belts:	
Motor:	

WARNINGS AND SAFETY REMINDERS FOR SCREW, DRAG, AND BUCKET ELEVATOR CONVEYORS

CEMA Document: SC 2004-01

APPROVED FOR DISTRIBUTION BY THE SCREW CONVEYOR SECTION OF THE CONVEYOR EQUIPMENT MANUFACTURERS ASSOCIATION ("CEMA")

Honeyville Metal, Inc. ("HMI") does not install conveyors. It is the responsibility of the contractor, installer, owner and user to install, maintain and operate the conveyor, components and, conveyor assemblies in such a manner as to comply with the Williams-Steiger Occupational Safety and Health Act and with all state and local laws and ordinances and the American National Standards Institute (ANSI) B20.1 Safety Code.

In order to avoid an unsafe or hazardous condition, the assemblies or parts must be installed and operated in accordance with the following minimum provisions.

1. Conveyors shall not be operated unless all covers and/or guards for the conveyor and drive unit are in place. If the conveyor is to be opened for inspection cleaning, maintenance or observation, the electric power to the motor driving the conveyor must be LOCKED OUT in such a manner that the conveyor cannot be restarted by anyone; however remote from the area, until conveyor cover or guards and drive guards have been properly replaced.
2. If the conveyor must have an open housing as a condition of its use and application, the entire conveyor is then to be guarded by a railing or fence in accordance with ANSI standard B20.1. (Request current edition and addenda)
3. Feed openings for shovel, front loaders or other manual or mechanical equipment shall be constructed in such a way that the conveyor opening is covered by a grating. If the nature of the material is such that a grating cannot be used, then the exposed section of the conveyor is to be guarded by a railing or fence and there shall be a warning sign posted.
4. Do not attempt any maintenance or repairs of the conveyor until power has been LOCKED OUT.
5. Always operate conveyor in accordance with these instructions and those contained on the caution labels affixed to the equipment.
6. Do not place hands, feet, or any part of your body, in the conveyor.
7. Never walk on conveyor covers, grating or guards.
8. Do not use conveyor for any purpose other than that for which it was intended.
9. Do not poke or prod material into the conveyor with a bar or stick inserted through the openings.
10. Keep area around conveyor drive and control station free of debris and obstacles.
11. Eliminate all sources of stored energy (materials or devices that could cause conveyor components to move without power applied) before opening the conveyor.
12. Do not attempt to clear a jammed conveyor until power has been LOCKED OUT.
13. Do not attempt field modification of conveyor or components.
14. Conveyors are not normally manufactured or designed to handle materials that are hazardous to personnel. These materials which are hazardous include those that are explosive, flammable, toxic or otherwise dangerous to personnel. Conveyors may be designed to handle these materials. Conveyors are not manufactured or designed to comply with local, state or federal codes for unfired pressure vessels. If hazardous materials are to be conveyed or if the conveyor is to be subjected to internal or external pressure, manufacturer should be consulted prior to any modifications.

CEMA and HMI insist that disconnecting and locking out the power to the motor driving the unit provides the only real protection against injury. Secondary safety devices are available; however, the decision as to their need and the type required must be made by the owner-assembler as we have no information regarding plant wiring, plant environment, the interlocking of the screw conveyor with other equipment, extent of plant automation, etc. Other devices should not be used as a substitute for locking out the power prior to removing guards or covers. We caution that use of the secondary devices may cause employees to develop a false sense of security and fail to lock out power before removing covers or guards. This could result in a serious injury should the secondary device fail or malfunction.

There are many kinds of electrical devices for interlocking of conveyors and conveyor systems such that if one conveyor in a system or process is stopped other equipment feeding it or following it can also be automatically stopped.

Electrical controls, machinery guards, railings, walkways, arrangement of installation, training of personnel, etc., are necessary ingredients for a safe working place. It is the responsibility of the contractor, installer, owner and user to supplement the materials and services furnished with these necessary items to make the conveyor installation comply with the law and accepted standards.

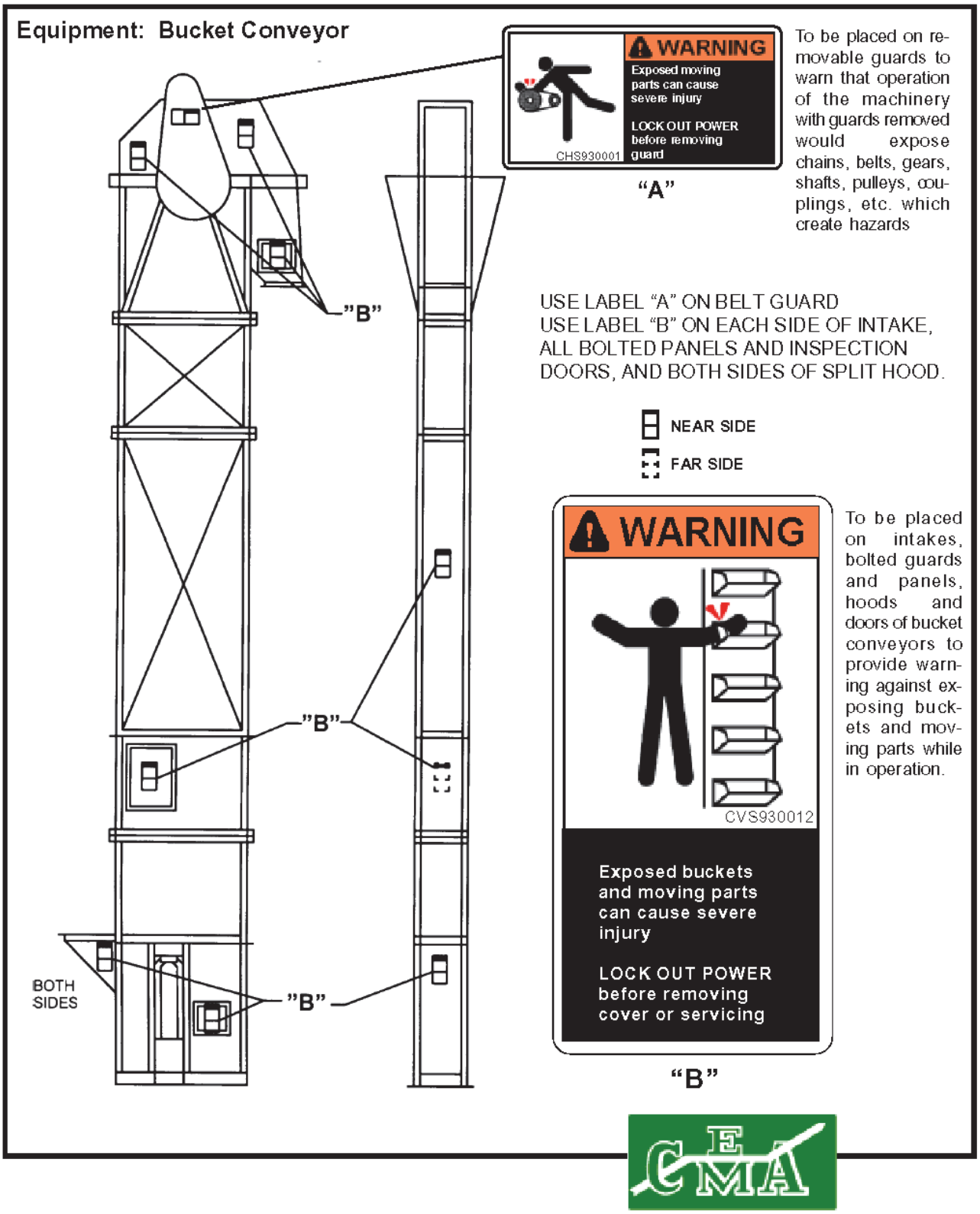
Conveyor inlet and discharge openings are designed to connect to other equipment or machinery so that the flow of material into and out of the conveyor is completely enclosed.

One or more warning labels should be visible on conveyor housings, conveyor covers and elevator housings. If the labels attached to the equipment become illegible, please order replacement warning labels from HMI or CEMA.

CEMA has produced an audio-visual presentation entitled "Safe Operation of Screw Conveyors, Drag Conveyors, and Bucket Elevators." CEMA and HMI encourage the acquisition and use of this source of safety information to supplement your safety program.

NOTICE: This document is provided by CEMA as a service to the industry in the interest of promoting safety. It is advisory only and it is not a substitute for a thorough safety program. Users should consult with qualified engineers and other safety professionals. CEMA makes no representations or warranties, either expressed or implied, and the users of this document assume full responsibility for the safe design and operation of equipment.

CEMA Safety Label Placement Guidelines


Equipment: Bucket Conveyor
WARNING
Exposed moving parts can cause severe injury
LOCK OUT POWER before removing guard
CHS930001
"A"
To be placed on removable guards to warn that operation of the machinery with guards removed would expose chains, belts, gears, shafts, pulleys, couplings, etc. which create hazards
"B"
"B"
"B"
BOTH SIDES
USE LABEL "A" ON BELT GUARD
USE LABEL "B" ON EACH SIDE OF INTAKE, ALL BOLTED PANELS AND INSPECTION DOORS, AND BOTH SIDES OF SPLIT HOOD.
NEAR SIDE
FAR SIDE
WARNING
CVS930012
Exposed buckets and moving parts can cause severe injury
LOCK OUT POWER before removing cover or servicing
"B"
To be placed on intakes, bolted guards and panels, hoods and doors of bucket conveyors to provide warning against exposing buckets and moving parts while in operation.
CEMA

Note: Labels alone do not substitute for a thorough in-plant safety training program centered on the hazards associated with operating your installed equipment. Contact CEMA (www.cemanet.org) or Honeyville Metal, Inc. for replacement labels.

ELEVATOR INSTALLATION INSTRUCTIONS

Honeyville Metal, Inc. ("HMI") offers you one of the finest Bucket Elevators in the industry. It has been carefully jig built using only the finest material and quality workmanship. Properly installed, your HMI Elevator should provide you with years of service with a minimal amount of required maintenance.

Following are some basic installation tips:

I. Inspection upon Delivery

- HMI Elevators can either be picked up uncrated or be shipped by HMI truck or commercial truck transport. If your elevator was picked up by your own truck, you will have made certain that the load was properly secured to insure that no parts were damaged. If your unit was shipped via, commercial transport, be sure to examine the shipment carefully for damaged parts. Also make certain that all the parts that are listed on the delivery receipt are received. If a damaged part or shortage is noted please contact HMI or the delivering truck driver immediately so that a claim may be filed.

II. Check of Components

- All HMI Elevators are shipped in a maximum of 10' sections. Belting is punched for the proper bucket spacing and rolled. Buckets are normally nested in a box. Head and Boot are usually shipped as individual units.
- Now that you have located all the major components, there may also be an additional shipment of accessories which you ordered. This may include such items as motors, distributors, ladders, service platforms, elbows, flanges, pipe, valves, pit augers, hoppers, and/or safety cage.

III. Advise of any Shortages

- Although every effort is made to see that your order is shipped complete and in all the correct sizes, mistakes do occur. If you have a shortage or mistake on your order, please accept our apology and notify us at once and we will do everything possible to correct the situation.

IV. Base Preparation

- Only a minimal amount of preparation is required. Most of these units may be bolted onto any reasonably level floor or solid base. However, taller units may require a concrete base or foundation.
- If the Elevator base is to be mounted to a basement floor or is installed in a pit where excessive moisture is present, it is recommended that a sump pump or tile is installed to insure a dry, accessible and safe Elevator boot area.
- Base plate drawings are available at your request. These drawings show the size and hole spacing of the Elevator boot flange. Usually four (4) hold down or anchor bolts are adequate for any size unit.
- Anchor bolts may either be placed in the cement of the boot foundation or holes may be drilled into cured concrete and draw tight anchor bolts placed into position.
- When a Boot pit is being planned, HMI recommends that adequate space be allowed around the base (18" to 36" in all directions) for servicing and cleanout.

V. Suggestions For Assembly

- Assembly bolts and nuts are supplied for connecting the trunking sections.
- There are a number of ways to erect the Elevator. The shorter units may be assembled, then raised to an upright position and then fastened to some type of support.
- Inside units are usually stacked, that is, the boot section is set in place and then each section is stacked onto the preceding one with the head section being installed last. Guy wires or cables are then attached to the building structure.
- If the above method is used, most people set scaffolding around the unit as it is being stacked and the lifting is done by crane.
- The stacking method (above) is most commonly used when erecting an outside unit. A crane with an adequate reach is set at a proper position to insure a safe working area and then the head section is attached with each trunking section being fastened to the preceding one as the head is raised. If so installed make certain that the head is properly braced where the crane is attached so as to eliminate "Swinging".
- Yet another method is to lift the head section by the use of a chain hoist or block and tackle and then hanging each section onto the one above.
- A method which is becoming more and more common with 40' or shorter units is to assemble the elevator complete on the ground, even going so far as to the installation of the belt, buckets, ladder, service platform, and valves. This complete unit is then tilted up into position with a crane. Although this appears to be a simple method, it needs to be done with extreme care to avoid damage to the Elevator. If the crane is not properly attached at several points on the Elevator, trunking can be bent by careless or inexperienced crane handling.
- HMI cannot accept responsibility for any damage to the Elevator during erection even if the above methods are used.

VI. Elevator Bracing

- Small capacity and shorter units usually require very little bracing. Elevators installed inside a building or along-side some kind of structure can usually be braced to the structure.
- HMI Elevators are self-supporting; however, they do require guy wires to prevent toppling by the prevailing winds.
- Guy wires are normally attached to the taller units for support in 3 or 4 directions and are most times attached at or near the service platform. The other ends of the cables are attached to a building or in most cases, to an anchor embedded in the ground. This anchor should be far enough away from the Elevator so that the guy wires extend upwards approximately 45 degrees. Turnbuckles should be used between the anchor post and the end of each guy wire to take up extra slack. It is important that the guy wires be snug but not tight. Too much pressure on the guy wires may damage your Elevator.
- Taller units may require more than one set of guy wires. Additional sets may be attached at 40'-0" intervals.
- Standard guy wire material which HMI normally uses is 3/8" or 5/16" Aircraft galvanized steel cable.

VII. Belt and Bucket Installation

- As in the actual erection of the Elevator, there are also many techniques for installing the belting and buckets. On all HMI models, the belting is pre-punched for the proper bucket spacing, and then rolled for ease of handling and shipping.
- The first step prior to installing the belt is to turn the take-up bolts on each side of the boot so that the maximum amount of travel is available. Correct alignment of the head and boot pulley is important since this will prevent edge wear and rubbing of the belts and buckets.
- If an old belt is being replaced, simply attach one end of the new belt to one end of the old belt and pull the new belt into position by taking the old belt out of the Elevator.
- One method of belting installation in a new Elevator is to place a clamp on the end of the belt and use a cable or rope to pull the belt into place. Make sure that the entire belt width is gripped securely.
- Another method is to install all the buckets onto the belt and simply use a crane to lift the belt above the head to drop the belt down on each side of the head pulley.
- Once the belt is in position, it is necessary to join the two ends of the belt together. Place a belt tightener or take-up unit on each end of the belt and draw it together.
- A standard lap joint is recommended by HMI. Overlap the ends of the belt approximately 3 to 4 feet and stretch the belt snug. Let the belt hang for at least 24 hours after the buckets have been installed and then stretch the belt again before making the final lap splice. Permitting the belt to remain under tension tends to distribute the stress uniformly throughout the entire belt.
- If the buckets were not installed on the belt before inserting the belt into the Elevator, this is the next job and should be done prior to making the final lap splice.
- There is one inspection door on the first trunking section above the boot. This is the access point for installing the buckets. It is recommended that every fifth bucket be put on the belt and rotated until the starting point is reached. Continue this rotation until all the buckets have been installed onto the belt. If every bucket is installed without staggering, the belt might become too heavy to rotate.

VIII. Ladder, Safety Cage, and Cross Braces

- When installing Tie Brackets between two Elevators, the Tie Brackets should be installed under the Trunking Flanges.
- Offset Ladder Brackets should always be installed with the offset to the left.
- If one or more Transfer Platform Assemblies are being installed with the ladder and safety cage, be sure to lay out the transfers with the ladder centered between the trunking where it meets the elevator head so that it lines up with the opening in the main platform.

IX. Attaching the Accessories

- Accessories such as hoppers, valves, and motors on small units are no problem, bolts for attachment of all accessories, are included with the Elevator shipment.
- A common way of installing the accessories, if the Elevator is to be assembled on the ground, is to also install the accessories prior to raising it with the crane. This includes ladder, service platform, valves and even motors.
- If the stacking method is used in erection, it is advised that the ladder and safety cage be installed with each trunking section (10'). The remaining accessories such as motors, and misc. parts should be lifted into place with a crane.
- Pipe is usually the last thing to be installed. This is usually raised with the crane or ropes. Angle flanges are supplied with the pipe along with quick clamps so that a minimum amount of welding is required.

X. Final Inspection prior to Operation

Now that you have successfully erected your HMI Elevator it is advisable that you inspect and check the following items before operation.

1. Check all the bucket bolts to assure that they are tight.
2. Check motor drive V belts to assure that they are snug and in line.
3. Check the motor wiring to assure proper rotation of the belt.
4. Check for any obstruction extending inside of the trunking sections.
5. Check to see that the buckets do not rub the inside of the trunking at any point in the length of travel. Belt alignment can be adjusted by tightening one of the boot take-ups.
6. Check the clearance between the buckets and the discharge adapter cutoff plate in the elevator head and adjust the cutoff plate accordingly. Clearance should be determined at the lap splice of the belt where the buckets will have their greatest projection.
7. Tighten the belt to prevent slipping on the head pulley.
8. Check the oil level in all gearboxes.
9. Once the motor is wired with the proper overload switch, the unit is ready for operation.

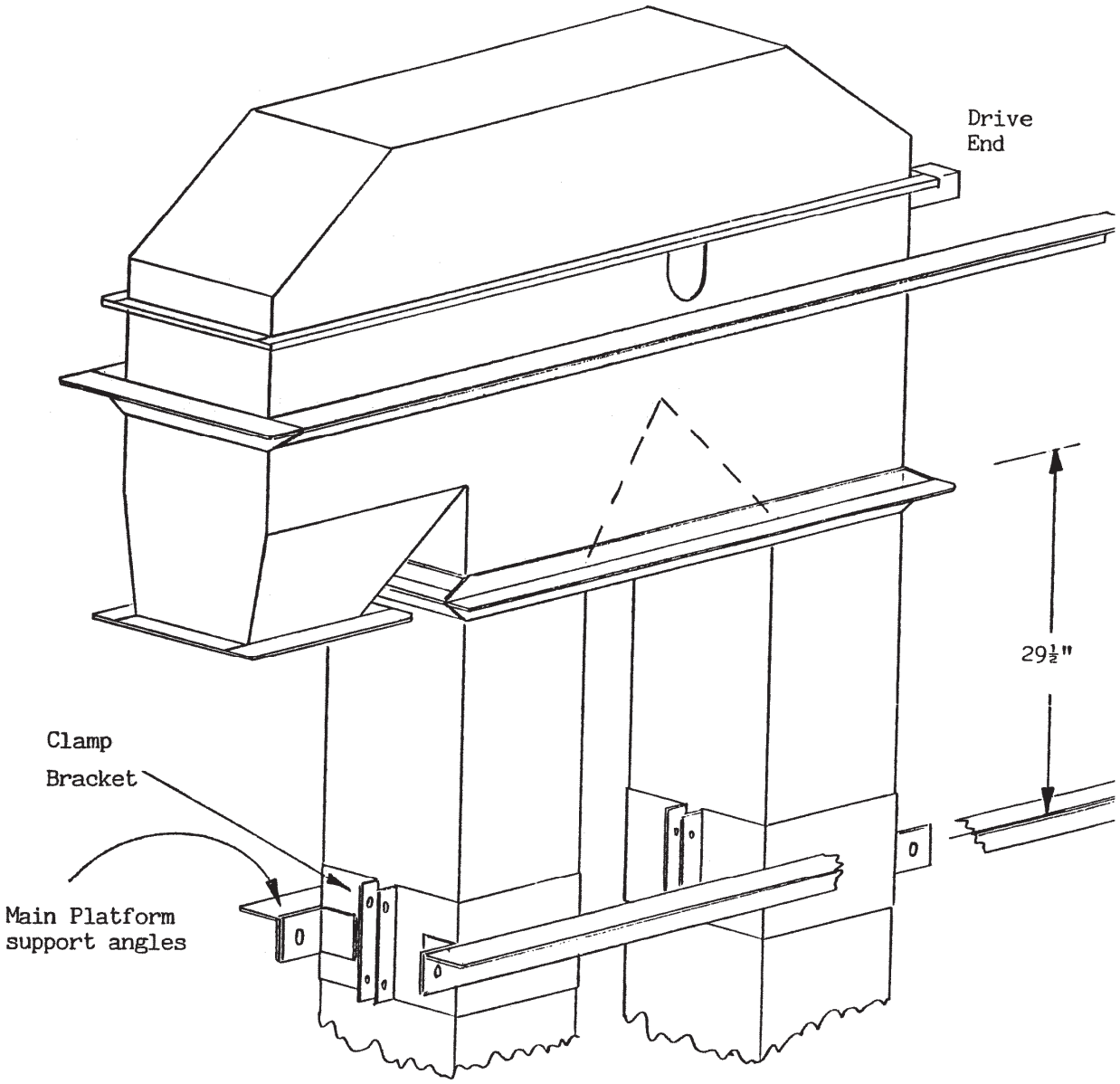
ELEVATOR OPERATION AND MAINTENANCE

Following are several pointers that will enable you to get the maximum service from your Elevator:

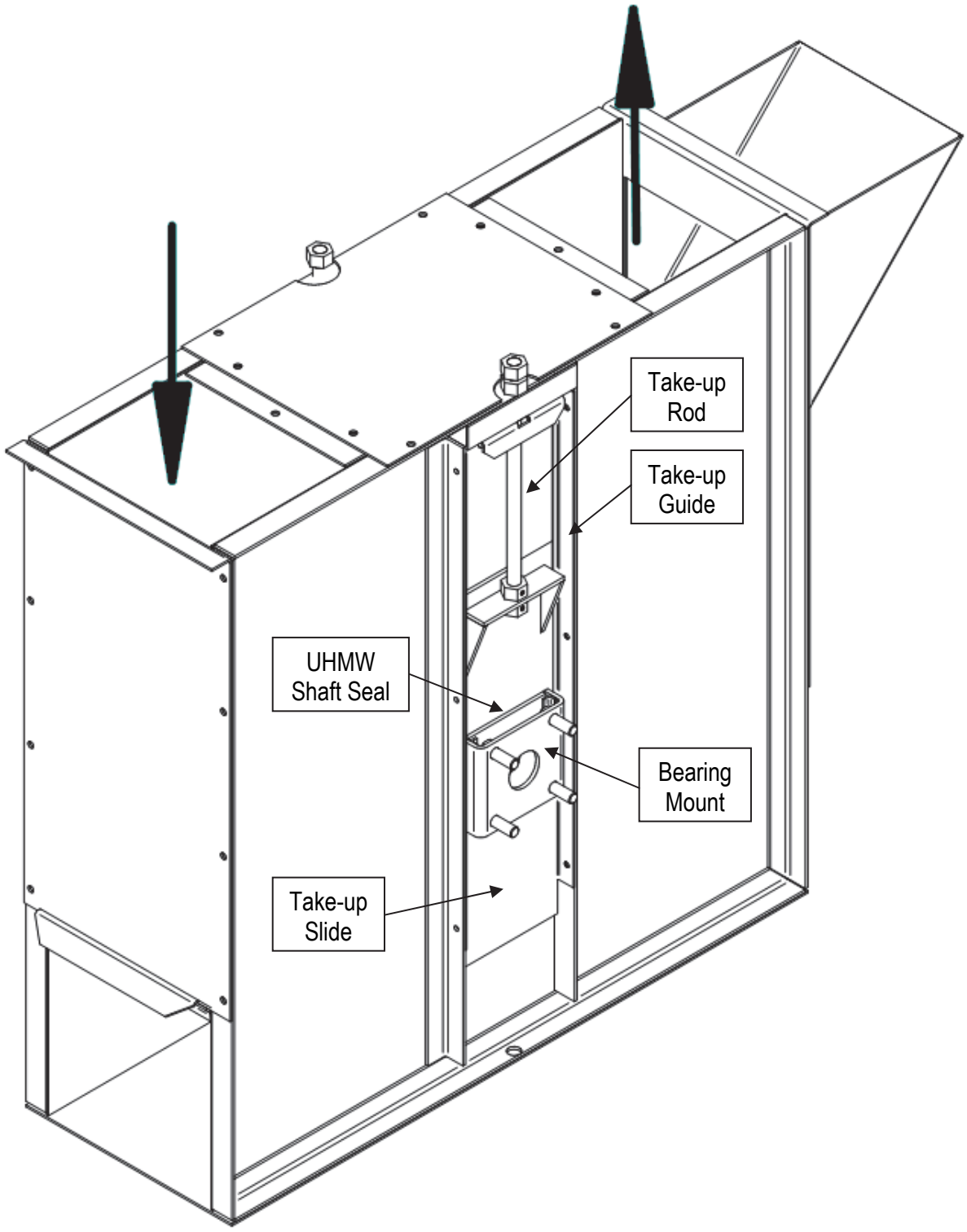
1. Check bucket bolts after a few days of operation and tighten nuts as required. On new installations, bolt heads will seat into the belt after a few days of operation thus permitting nuts to loosen.
2. Inspect again after three or four weeks of operation to see if nuts have loosened. Continue this inspection at the same interval on units operated continuously.
3. Belt should always be sufficiently tightened to prevent slippage on the Elevator Head pulley. Frequent inspection for belt tension should be made during the first 30 to 90 days of operation. The largest amount of belt stretch will occur during this period.
4. Belt tension is increased by turning down the boot take-up bolts.
5. When checking the buckets for tightness, be sure to examine the joint bolts and tighten, if required.
6. If the Elevator belt tends to run to one side of the pulley during the initial start up, adjust the boot take ups one at a time until the belt runs to the center of the boot pulley.
7. Lubricate all bearings after four to six weeks of continuous operation. Do not over lubricate as this tends to force the grease seals.
8. Lubricate all motors as recommended by the manufacturer.
9. Lubricate all gear reducers according to the manufacturer's specifications, taking into account the range of ambient temperatures the gear reducer operates in. Honeyville provides gear reducers with the following lubricants: Gear Reducers ***without*** internal back stop mechanisms are lubricated with ISO Viscosity Grade 220 Synthetic EP (Extreme Pressure) oil, and Gear Reducers ***with*** internal back stop mechanisms are lubricated with ISO Viscosity Grade 220 Synthetic non-EP (non-Extreme Pressure) oil.
10. If your elevator has a jack shaft, it is advisable to oil the roller chain which runs from the jack shaft to the head shaft every six months of operation.
11. Be sure that proper alignment is maintained between the jack shaft sprocket and the head shaft sprocket. These are aligned during construction, but set screws could loosen during operation permitting one sprocket to move on the shaft. This misalignment causes wear on the chain and on the sprocket teeth.
12. Proper tension on the roller chain is important. This is properly adjusted during construction, but during use and wear the tension may change. Operating the Elevator with too little tension on the chain will cause it to "climb" on the teeth resulting in excessive wear.
13. On farm type installations, which are used seasonally, it is advisable to inspect the elevator prior to heavy use.
14. On installations that require the Elevator boot to be in direct exposure to extreme weather conditions, it is recommended that the take up bolts be liberally treated with lubricating oil or rust preventative. This will make the take-up operate more easily when necessary.
15. It is recommended that water, wet dust, and chaff should not be permitted to collect around the base of the Elevator in the pit. Although HMI constructs the Elevator boot of hot dipped heavy gauge steel, the above conditions will in time cause the boot and lower sections of the structure to rust.

MAIN PLATFORM MOUNTING DETAIL

Model 24-10

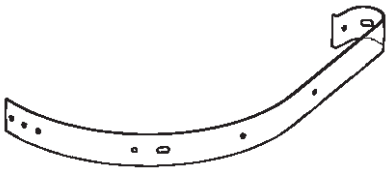


ELEVATOR BOOT DETAIL

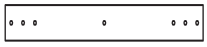


LADDER AND SAFETY CAGE PARTS

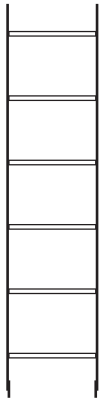
Part Number	Description
LDLD1002	Service Ladder 5' Section
LDLD1003	Service Ladder 10' Section
LDSCH001	Hoop Half for Safety Cage
LDSCH002	Hoop Extender for Safety Cage on Side-by-Side Ladders
LDSCH003	Hoop Expander for Flaring Bottom Safety Cage Hoop
LDSCS009	9" Safety Cage Strap 14 Ga Galv
LDSCS028	28" Safety Cage Strap 14 Ga Galv
LDSCS032	32½" Safety Cage Strap 14 Ga Galv
LDSCS048	48½" Safety Cage Strap 14 Ga Galv
LDSCS058	58½" Safety Cage Strap 14 Ga Galv



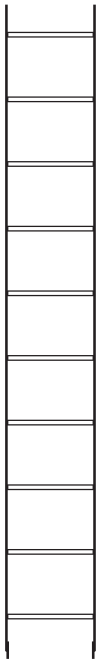
LDSCH001
Hoop Half for Safety Cage



LDSCH002
Hoop Extender for Safety Cage on Side-by-Side Ladders



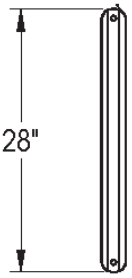
LDLD1002
Service Ladder 5' Section



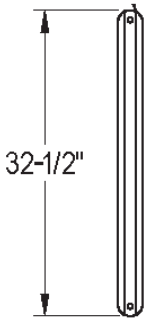
LDLD1003
Service Ladder 10' Section

LDSCH003
Hoop Expander for Flaring Bottom Safety Cage Hoop

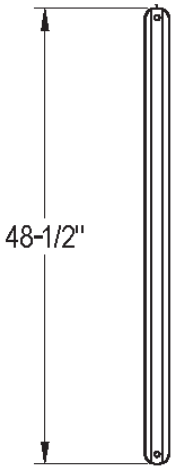
LDSCS009
9" Safety Cage Strap



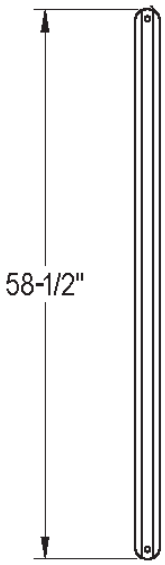
LDSCS028
28" Safety Cage Strap



LDSCS032
32½" Safety Cage Strap

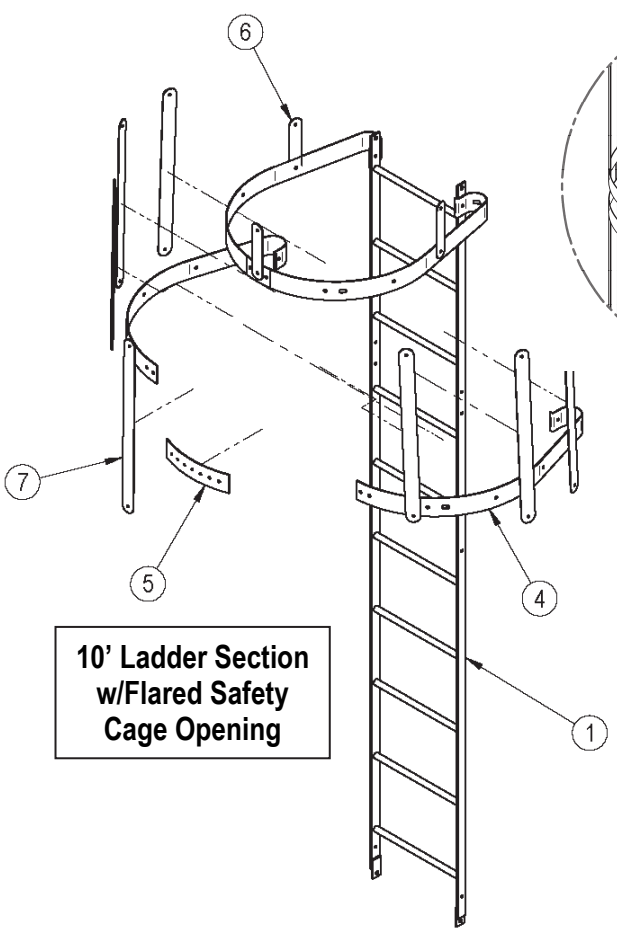


LDSCS048
48½" Safety Cage Strap

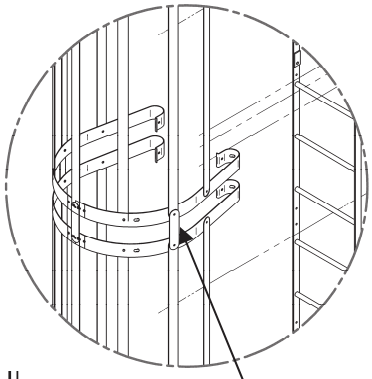


LDSCS058
58½" Safety Cage Strap

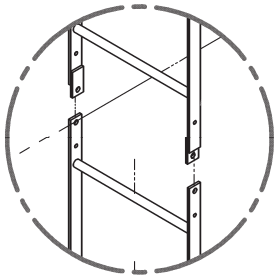
LADDER AND SAFETY CAGE ASSEMBLY DETAILS

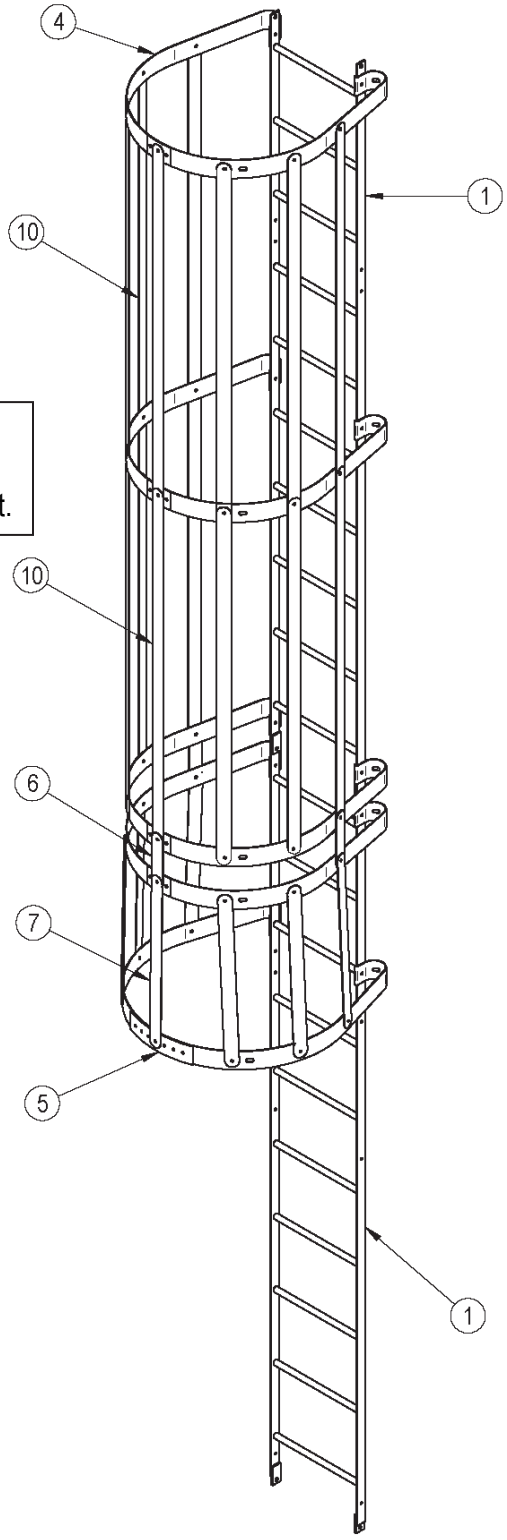


10' Ladder Section w/Flared Safety Cage Opening



Three 9" Safety Cage Straps are required at each ladder section joint.



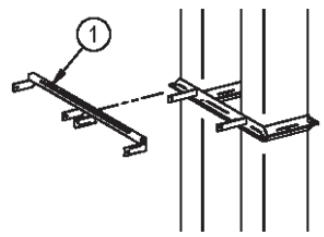


20' Ladder Section w/10' of Safety Cage + Flared Safety Cage Opening

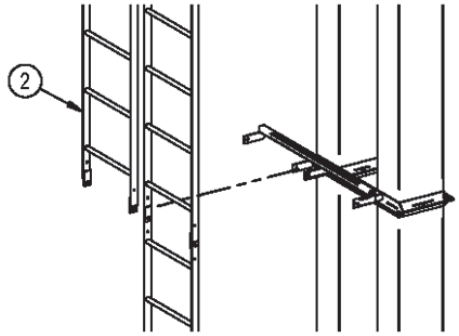
Material List for 10' Ladder Section w/ Flared Safety Cage Opening			
Item	Qty	Part Number	Description
1	1	LDLD1003	Service Ladder 10' Section
4	4	LDSCH001	Hoop Half for Safety Cage
5	1	LDSCH003	Hoop Expander for Flaring S.C. Hoops
6	3	LDSCS009	9" Safety Cage Strap 14 Ga Galv
7	7	LDSCS028	28" Safety Cage Strap 14 Ga Galv

Material List for 10' Ladder Section w/ Standard Safety Cage			
Item	Qty	Part Number	Description
1	1	LDLD1003	Service Ladder 10' Section
4	6	LDSCH001	Hoop Half for Safety Cage
6	3	LDSCS009	9" Safety Cage Strap 14 Ga Galv
10	14	LDSCS058	58½" Safety Cage Strap 14 Ga Galv
….Hardware for Assembling Safety Cage			
*	27	HWMB505008	5/16"-18 x 1" Hex Grade 5 Machine Bolt
*	27	HWNT0205	5/16"-18 Nut
….Hardware for Bolting Ladder Sections Together			
*	2	HWMB506012	3/8"-16 x 1½" Hex Grade 5 Machine Bolt
*	2	HWNT0206	3/8"-16 Nut
* Item not shown			

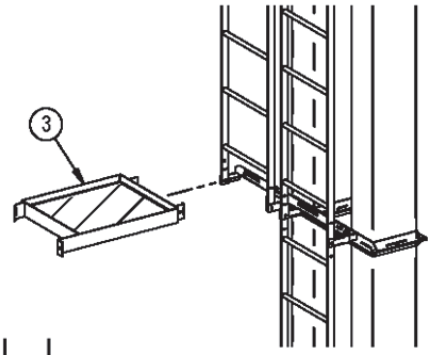
LADDER TRANSFER PLATFORM ASSEMBLY



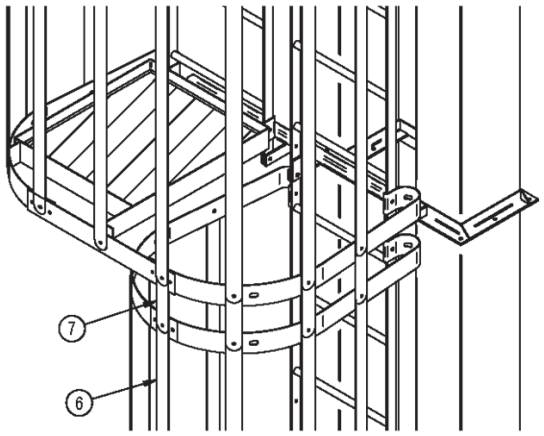
STEP 1



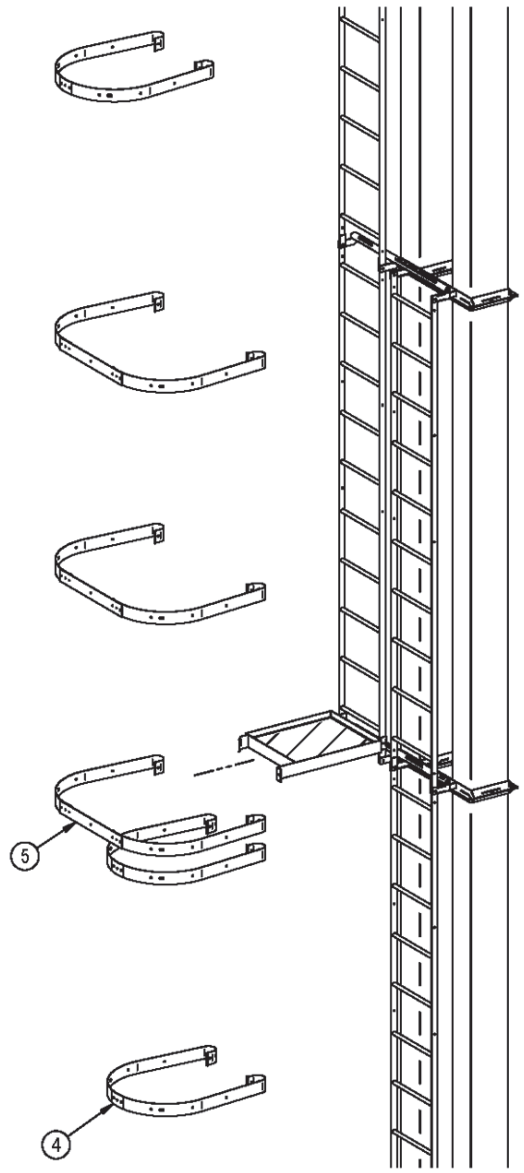
STEP 2



STEP 3



STEP 5



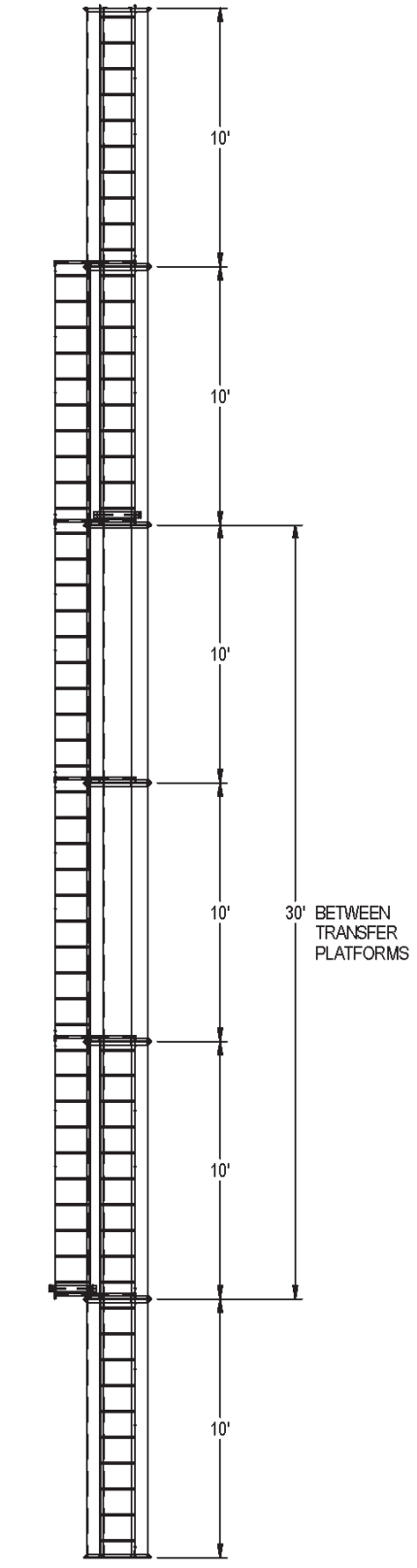
STEP 4

Item	Part Number	Description	Quantity based on Ladder Height			
			40' - 60'	70' - 90'	100' - 120'	130' - 150'
1	LDOB1001 *	Offset Ladder Bracket	5	5	10	10
2	LDLD1003	Service Ladder 10' Section	1	2	3	4
3	LDTP1001	Reversible Transfer Platform	1	2	3	4
4	LDSCH001	Hoop Half for Safety Cage	-	-	-	-
5	LDSCH002	Hoop Extender for Safety Cage	3	6	9	12
6	LDSCS058	58½" Safety Cage Strap	4	8	12	16
7	LDSCS009	9" Safety Cage Strap	-	-	-	-

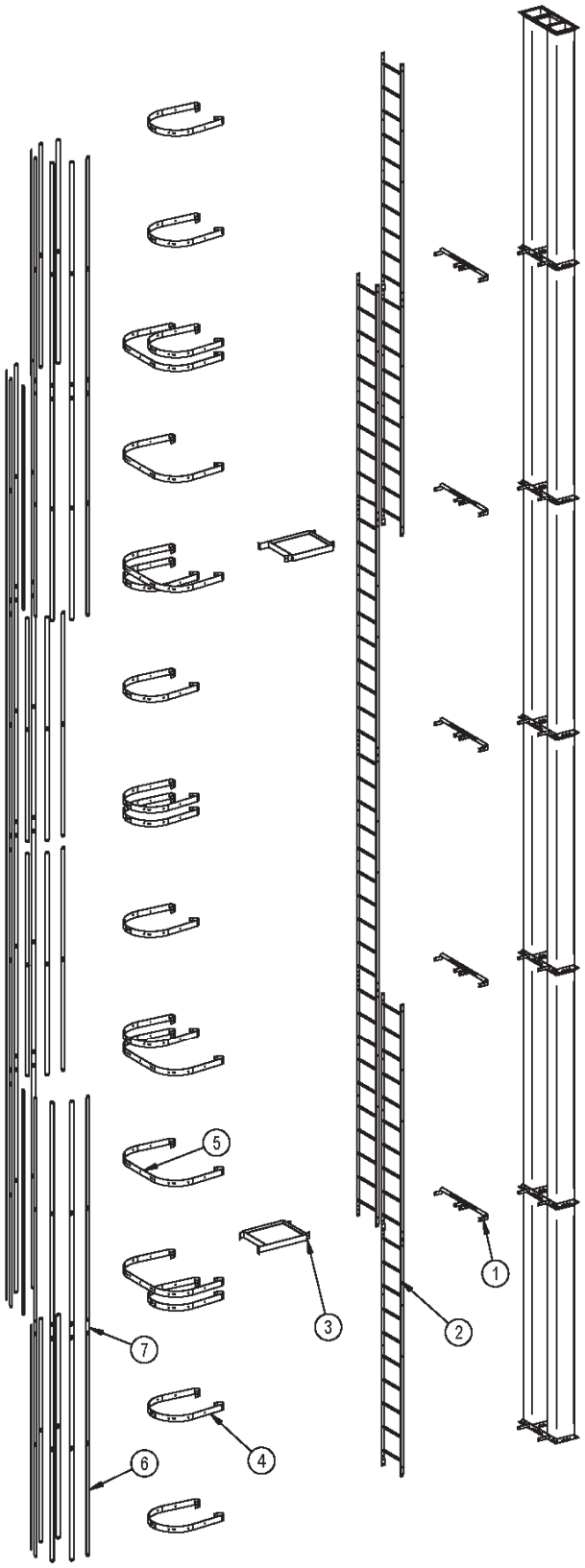
Note: Quantities shown above are in addition to standard ladder and safety cage parts already included with your order and is based on 30' between platforms.

* Honeyville includes three Offset Ladder Brackets with each Ladder Trasfer Platform Assembly to ensure you have sufficient brackets for your installation.

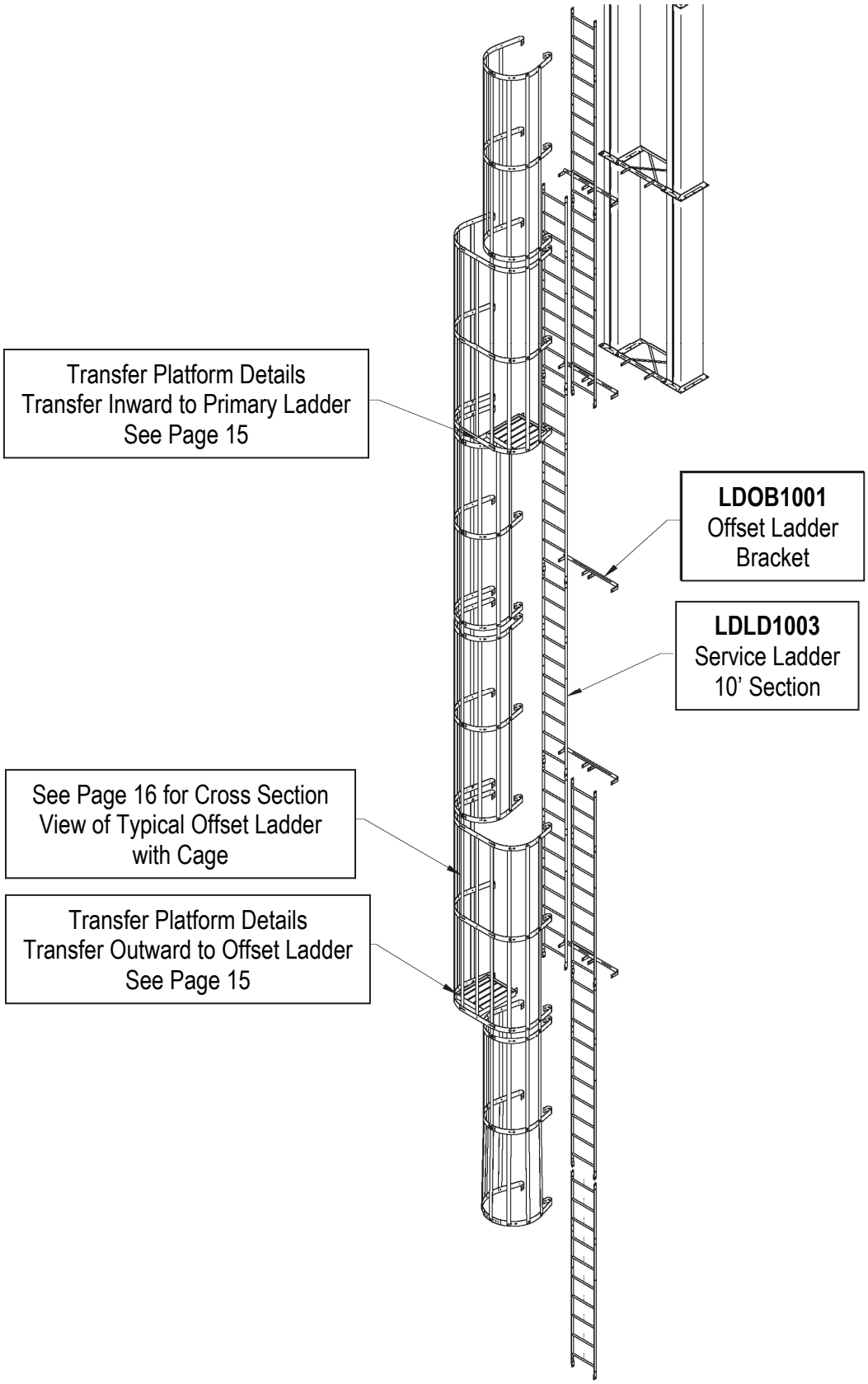
LADDER TRANSFER PLATFORM ASSEMBLY



TYPICAL LAYOUT

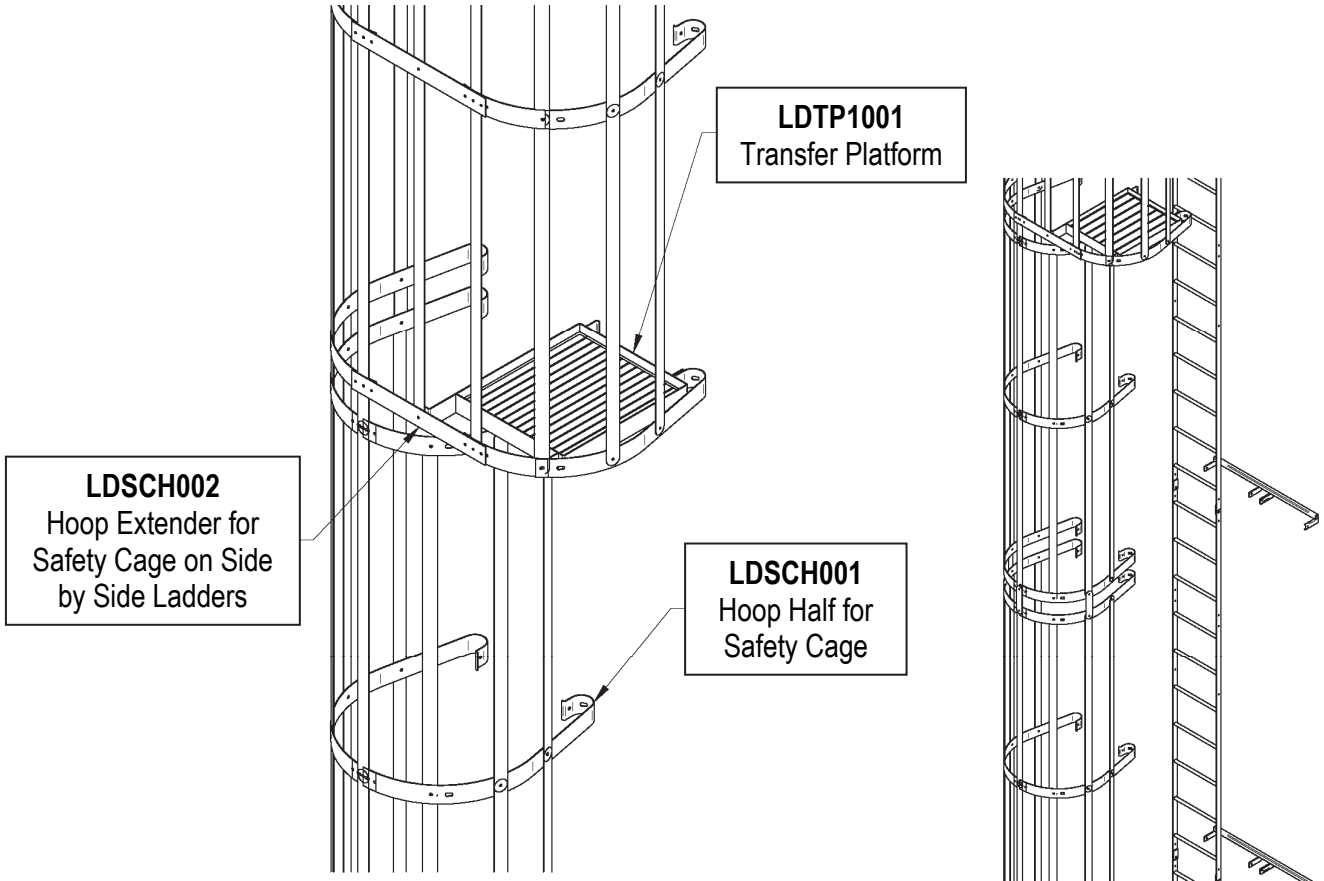


LADDER TRANSFER PLATFORM ASSEMBLY

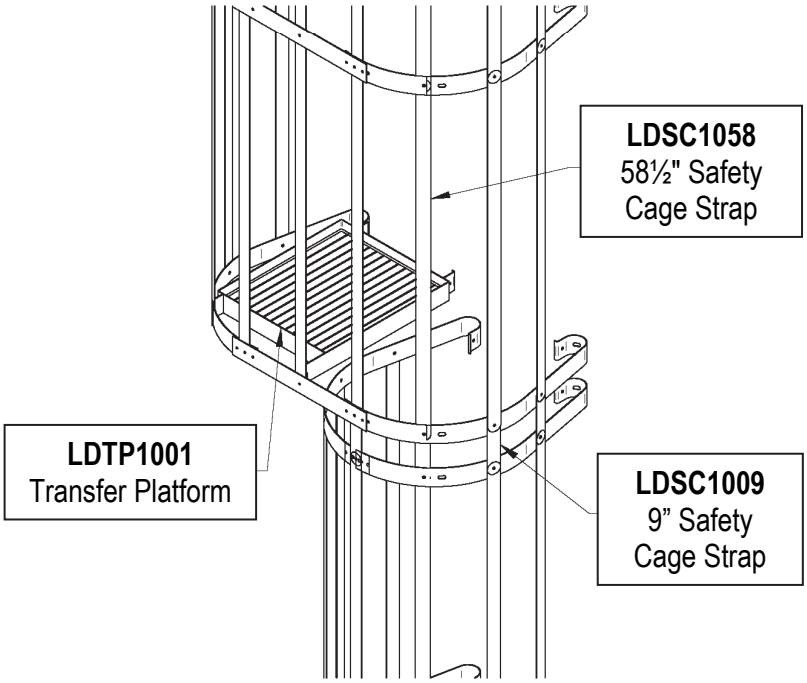


LADDER TRANSFER PLATFORM ASSEMBLY

Transfer Inward to Primary Ladder

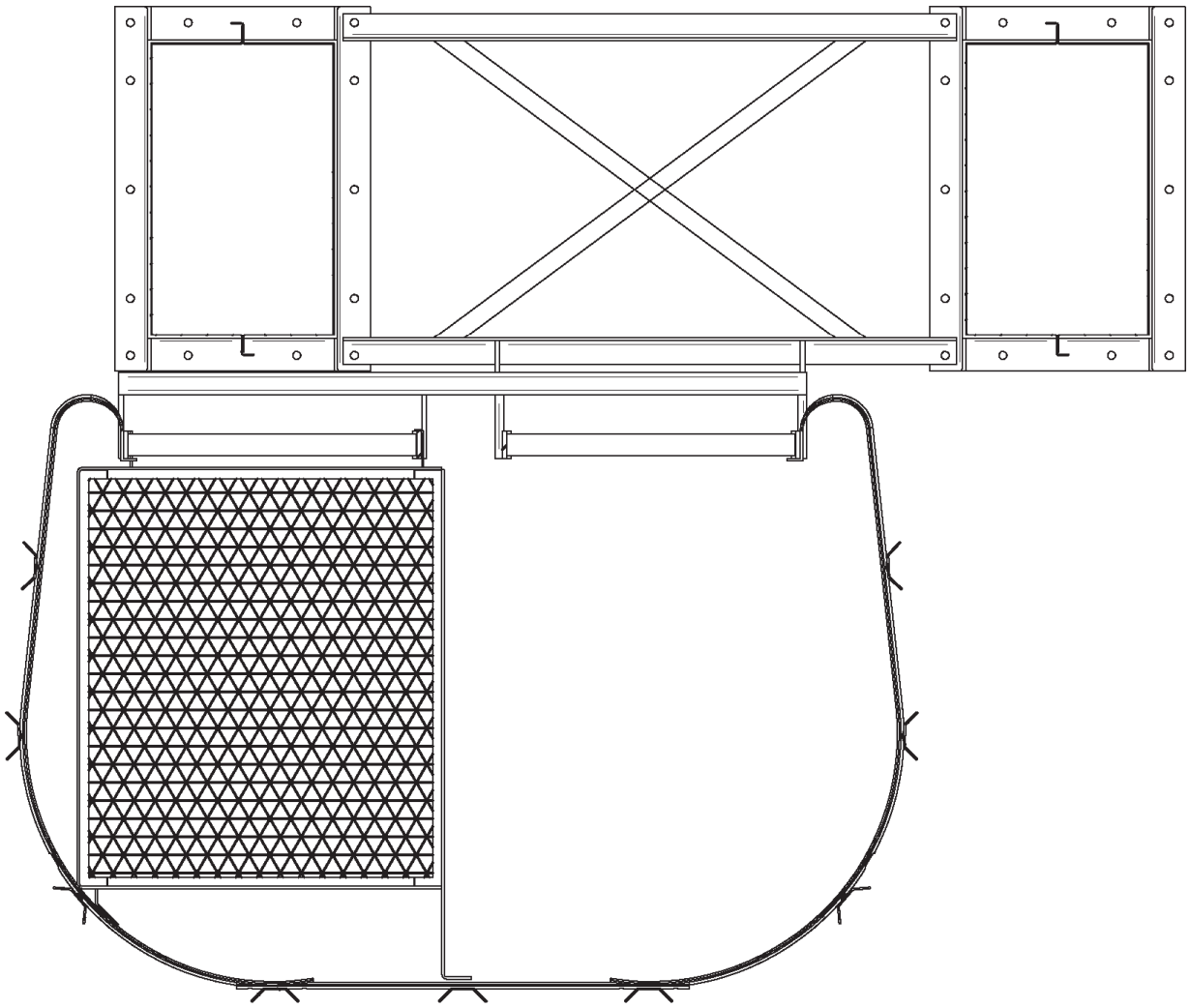


Transfer Outward to Offset Ladder



LADDER TRANSFER PLATFORM ASSEMBLY

Typical Cross Section
Top View



perma CLASSIC
Automatic Lubricator

The perma CLASSIC is Ex-Proof certified, equivalent to USA – NEC 500 and NEC 505 certification.

Volume: 120cc
Housing Design: Metal
Lubrication Period: 1, 3, 6, or 12 months

Operating Temperature Range: 32°F to 104°F
Pressure Build-up: max. 4 bar / 65 psi

- Supplies all lubrication points with grease or oil
- Fully automatic, maintenance-free
- Indicates when fully discharged
- Lubricates up to 12 months, depending on type
- Can be replaced by hand, without tools
- Operates in any position
- Lubricators are non-reusable
- **Replacement Kit: HMPS-RK-1**
- **New Application Kit: HMPS-LK1**

Operational Principles

By tightening the plastic activating screw, the gas generator falls into the liquid electrolyte. The chemical reaction builds up pressure which causes the piston to move forward. The lubricant is continuously injected into the lubrication point. At the end of the lubrication period the discharge indicator cap becomes clearly visible, indicating the lubricant has been fully discharged due to its transparent casing the movement of the piston can be seen during the lubrication cycle. The delay between activation & lubrication depends on the perma type. The perma CLASSIC & FROST contain 4.8oz (120cc) of lubricant which is also equal to 100 shots of grease.

perma CLASSIC
Automatic Lubricator

Installation

Fig. 1

Fig. 2

Fig. 3

Fig. 4

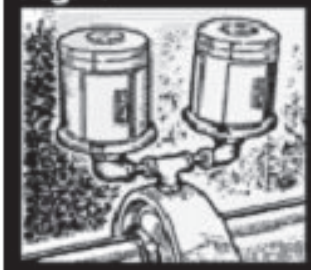
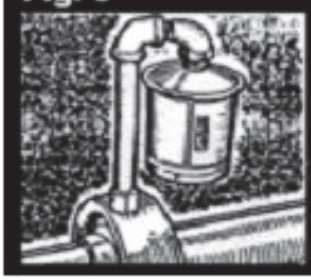


Fig. 5



- We recommend activating the unit prior to installing it. Do not expect immediate discharge; operating pressure takes from 1 to 12 days to develop, depending on the PERMA month type.
- Take the plastic activator and begin to hand tighten into the opening bottom of the PERMA.
- When the activator becomes hand tight, take a screw driver and insert it through the top ring of the activator (**fig.1**). PERMA Classic activators are recognized by the Black O-ring seal and Futura activators by their Pink O-ring seal. Continue to tighten until the O-ring breaks off (**fig. 2**). **DO NOT** break ring off by hand. This could jeopardize the activation of the PERMA. To insure the activation pellet has fallen from the activator into the bladder that starts the chemical dispensing reaction, simply shake the PERMA to hear the pellet rattle inside.
- Enter installation & replacement dates on the label.
- **Prior to installation, ALWAYS pre-lubricate the bearing / lubrication point using a hand grease gun filled with the same or compatible grease as the PERMA to ensure it is accepting grease freely.**
- Remove the grease fitting.
- Remove the black outlet plug from the PERMA canister.
- Typically most bearing lubrication ports are 1/8" or 1/4". The PERMA thread is 1/4" MNPT. If the grease inlet is 1/8", you will need a 1/4" F x 1/8" M adapter (part # B100; **fig. 3**). If your inlet is 1/4", you can mount direct. Either way, screw the PERMA into the fitting or bearing **hand tight only**.
- Bearing requiring greater amounts of grease can be served by mounting several PERMAS in series using standard PERMA Accessory Parts (**fig.4**).
- Grease filled PERMAS may be mounted in any direction (**fig. 5**), even under water.
- All Oil filled PERMAS require a check valve at the point of lubrication (part# A810). **Remote Installations & Max. Remote Distance w/ NLGI #2 Grease @ 77 F**
- PERMAS may be remote mounted by means of pipe or tubing/hose. This allows for continuous lubrication of hard to reach spots, such as points located inside of machinery guards. Always use 1/4" pipe or 3/8" tubing/hose (150 PSI minimum burst pressure rating).
- Make sure pipe or tubing is pre-filled with the same or compatible lubricant. **1-month (6 feet), 3-month (4 feet), 6-month (2 feet), 12-month (1 foot)**
- Lower NLGI grades and oil may be remote further distances. Call for assistance.

Register Your New CC Swift in Four Easy Steps:

1) Your Contact Information

Company Name:_____

First Name:_____ Last Name: _____

Address:_____

City: _____ State:_____ Zip:_____

Country:_____

Phone: _____ Fax: _____ E-Mail:_____

Purchase Date:_____ Delivery Date: _____

2) Your Bucket Elevator Information

Brand: Honeyville Metal, Inc. Serial Number: _____

Advertised Capacity (BPH): _____

Bucket Size: _____ Bucket Vertical Centers: _____ Bucket Color: Yellow Bucket Rows: _____

Belt Speed (FPM) or Head Shaft (RPM): _____ Head Pulley Diameter: _____

Commodity(s) Elevated:_____

➤ Bucket Elevator Usage (circle one): Farm Use Commercial Use

3) Your Dealer Information

Dealer Company Name: _____ Contact Name:_____

Address:_____

City: _____ State:_____ Zip:_____

Country:_____

Phone: _____ Fax: _____ E-Mail:_____

➤ Did your dealer install the bucket elevator (circle one)? Yes No

➤ If selling dealer did not install, who did? _____

4) Mail or Fax Completed Form

Mailing Address:
TOPS Inc.
2641 Metro Blvd .
Maryland Heights, MO 63043

OR

Fax Number:
(314) 395-8671

➤ Upon receipt of completed form, TOPS will send a confirmation that your new "Performance Warranty" is active.

On behalf of TOPS, authorized bucket elevator manufacturers, and involved dealers, we sincerely appreciate your choice in partnering with us for your new equipment purchase!

PERFORMANCE WARRANTY REGISTRATION COVERAGE

Exclusive 2-Year Performance Warranty Coverage

TOPS' exclusive "Performance Warranty" is valid only on newly purchased bucket elevators purchased through a TOPS authorized original equipment bucket elevator manufacturer (OEM). When CC Swifts are installed from the factory on new equipment, TOPS will warranty the wear performance of these heavy-duty non-metallic elevator buckets for a two year period. Simply stated, we guarantee our new standard of heavy-duty elevator buckets will offer a minimum of two years trouble free service in your bucket elevator; and if they don't under normal running conditions, TOPS will send out new CC Swifts free of charge!

Warranty Period

Two years from date of original purchase from an authorized bucket elevator manufacturer.

Bucket Elevators Covered

A. Only newly manufactured bucket elevators which are sold by TOPS authorized bucket elevator manufacturers (OEMs).
B. Any bucket elevator capacity rating.

Elevator Buckets Covered

TOPS' full line of CC Swift non-metallic, heavy-duty elevator buckets manufactured in polyethylene, nylon or urethane.

Covered By This Performance Warranty

A. The original purchasing individual or company.
B. Persons or companies to whom ownership of the bucket elevator is transferred during the term of the applicable warranty period; but only for the balance of the warranty period remaining from the original purchase.

Warrantor

Therm-O Plastic Suppliers, Inc. (TOPS)
2641 Metro Boulevard
Maryland Heights, MO 63043
Customer Service: (877)-326-4707
Website: www.topsinc.us

Duties of OEM or Dealer

A. Inform consumer of warranty and provide warranty form to be filled out.
B. Supply the correct CC Swift elevator bucket that is manufactured in the correct plastic (polyethylene, nylon, urethane) for the commodity being elevated.

Duties of Bucket Elevator User

A. COMPLETION AND RETURN OF THE CC SWIFT PERFORMANCE WARRANTY FORM TO TOPS, WITHIN 30 DAYS OF ORIGINAL BUCKET ELEVATOR DELIVERY, IS REQUIRED TO REGISTER THE PURCHASE.
B. Exercise reasonable bucket elevator maintenance, care and operation.
C. Should a failure of a CC Swift occur, the consumer must notify a TOPS customer service representative immediately at (877) 326-4704 to receive instructions for bucket return and replacement. A TOPS sales engineer may visit to assess the claim.

Duties of Warrantor

A. Any defective CC Swift elevator bucket covered by this "Performance Warranty" will be replaced by TOPS at no cost to the consumer. TOPS WILL NOT reimburse or be charged with labor, labor costs, down time costs or equipment rental etc.
B. If a second claim occurs at any time during the two year warranty period, a TOPS Inc. sales engineer will make an appointment with the consumer to examine the bucket elevator exhibiting problems. TOPS will help diagnose the problem in the bucket elevator.
C. Elevator buckets and hardware (if needed) will be replaced free of charge as well as standard freight or UPS service.
D. TOPS will ship replacement buckets and hardware (if needed) in a timely manner.

Warranty Exclusions and Limitations

A. The following failures are not covered by this warranty:
   1. Bucket failure due to UV damage.
   2. Bucket failure due to tramp material or abnormal impact.
   3. Failure that occurs while two or more brands are running at the same time in the same bucket elevator.
   4. Failure due to improper elevator bucket installation.
   5. Failure due to improper bucket elevator or elevator belt maintenance or installation.
   6. Failure, ultimately caused by extreme hot / cold temperatures or chemical breakdown.
   7. Failure due to unauthorized elevator bucket modifications.
B. TOPS WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES AND THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN.